



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,080	04/10/2002	Takuo Mochizuka	221104US2PCT	2886

22850 7590 07/16/2003

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER

CHOI, WILLIAM C

ART UNIT PAPER NUMBER

2873

DATE MAILED: 07/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/089,080

Applicant(s)

MOCHIZUKA ET AL.

Examiner

William C. Choi

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-6 is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 April 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Priority*

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. PCT/JP01/08297, filed on 9/25/2001.

### *Information Disclosure Statement*

Receipt of the Information Disclosure Statement (IDS) with the copies of the references cited therein was received on 7/9/2002. An initialized copy of the IDS is enclosed with this office action.

### *Drawings*

Figures 6 and 7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Specification*

The disclosure is objected to because of the following informalities: on page 8, line 24, "an EC layer 12" should be changed to "an EC layer 13".

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al (U.S. 5,148,306) in view of Rukavina et al (U.S. 6,471,360 B2).

In regards to claim 1, Yamada et al discloses a solid-state electrochromic device (column 1, lines 10-11, Figure 3) comprising: a lower transparent conductive layer formed into filmy shape (column 5, lines 43-46, Figure 3, "2" and "7") on a glass substrate (column 5, lines 37-38, Figure 3, "10"), partially provided with a groove and insulated with the groove (column 5, lines 43-48, Figure 3, re space between "2" and "7"); an electrochromic layer layered on the lower transparent conductive layer (column 5, lines 51-59, Figure 3, "3-5"); an upper transparent conductive layer formed into filmy shape over a portion insulated with the groove (column 5, lines 63-65, Figure 3, "7") of the lower transparent conductive layer, and a top of the electrochromic layer (column 5, lines 60-63, Figure 3, "1"); and a sealant (column 6, lines 35-36, Figure 3, "9") and opposed glass plate laminated on the upper transparent conductive layer (column 6, line 35, Figure 3, "6"), wherein terminals are bonded to an end of the lower transparent conductive layer (column 6, lines 24-26, Figure 3, "8a" and "2") and an end of the insulated portion of the lower transparent conductive layer (column 6, lines 23-24, Figure 3, "8a" and "7") in order to apply a driving voltage to the electrochromic layer

(column 6, lines 19-30), but does not specifically disclose the terminals being made of metal foil to which an electrically conductive adhesive material is applied. Within the same field of endeavor, Rukavina et al (U.S. 6,471,360 B2) teaches that it is well known for the terminals (i.e. "bus bars") of an electrochromic device to comprise metal foil to which an electrically conductive adhesive material is applied (column 8, lines 19-24 and column 15, line 53 – column 16, line 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the terminals of Yamada et al to be made of metal foil to which an electrically conductive adhesive material is applied since Rukavina et al teaches that it is well known for the terminals (i.e. "bus bars") of an electrochromic device to comprise metal foil to which an electrically conductive adhesive material is applied.

Regarding claim 2, Rukavina et al further teaches the terminals being made of copper foil (column 8, lines 21-22).

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al in view of Rukavina et al as applied to claim 1 above, and further in view of Jordan et al (U.S. 6,062,920).

Regarding claim 3, Yamada et al in view of Rukavina et al discloses as set forth in claim 1 but does not specifically disclose wherein the metal foil terminals have undergone anti-corrosive treatment. Within the same field of endeavor, Jordan et al teaches that it is desirable to treat terminals (i.e. bus bars) of an electrochromic device

for corrosion resistance for the purpose of increasing the lifetime of the conductivity of the terminal (column 8, lines 2-44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the terminals of Yamada et al in view of Rukavina et al to have undergone anti-corrosive treatment since Jordan et al teaches that it is desirable to treat terminals (i.e. bus bars) of an electrochromic device for corrosion resistance for the purpose of increasing the lifetime of the conductivity of the terminal.

***Allowable Subject Matter***

Claims 4-6 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to teach a combination of all the claimed features as presented in claim 4: a mirror system using a solid-state electrochromic device as claimed, specifically wherein the device comprises a metal reflective coating formed into a filmy shape on a glass substrate and a lower transparent conductive layer formed into filmy shape on the metal reflective coating.

The prior art fails to teach a combination of all the claimed features as presented in claims 5 and 6: a CRT display including a filter layer as claimed specifically being comprised of a solid-state electrochromic device which includes a lower transparent conductive layer and metal foil terminals, to which an electrically conductive adhesive material is applied, at an end portion of the lower transparent conductive layer.

**Conclusion**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Choi whose telephone number is (703) 305-3100. The examiner can normally be reached on Monday-Friday from about 9:00 am to 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on (703) 308-4883. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

W.C

William Choi  
Patent Examiner  
Art Unit 2873  
July 3, 2003

  
Georgia Epps  
Supervisory Patent Examiner  
Technology Center 2800